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AUTHOR	Wolfe, Rosemary
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ABSTRACT

In order to help students make the transition from high school to higher education, the Anne Arundel Community College's (Maryland) Supplemental Instruction with Mentoring Support provides a program of academic support for students enrolled in difficult required courses. The program also creates valuable opportunities for faculty professional development and community interaction. Study sessions are led by community college students who have successfully completed difficult required science, math, and business courses. They re-take the classes and lead study sessions to aid students with mastery of course material and development of study skills. Faculty serve as mentors to the student teachers. In addition, local community leaders provide mentoring support to students in small group sessions and on-site visits, allowing students to interact with leaders in their career fields. Students who participated in the Supplemental Instruction program earned higher mean grades than students who did not participate. 78% of the participants passed the class being supplemented, while 44% of the non-participants passed. They were also retained by the college at higher rates. Faculty and community leader responses confirmed the value of the program. Dissemination of program information is underway at other colleges interested in replicating it. (YKH)

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ED 413 942

Supplemental Instruction with Mentoring Support at Anne Arundel Community College

Final Report: Fund for the Improvement of Postsecondary Education Grant

Rosemary Wolfe

Fund for the Improvement of Postsecondary Education

U.S. DEPARTMENT OF EDUCATION
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Anne Arundel Community College
101 College Parkway
Arnold, MD 21014

Grant Number:

116 A 81511

Project Dates:

Starting Date: August 15, 1989
Ending Date: December 31, 1991
Number of Months: 40

Project Director:

Rosemary Wolfe
Chair, Education Department
Anne Arundel Community College
101 College Parkway
Arnold, MD 21012

FIPSE Program Officer: Jaymie Lewis

Grant Award:

Year 1	$54,078
Year 2	$47,065
Year 3	$39,270
Total	$140,413

SUMMARY OF THE PROJECT

SUPPLEMENTAL INSTRUCTION WITH MENTORING SUPPORT AT ANNE ARUNDEL COMMUNITY COLLEGE

Anne Arundel Community College's Supplemental Instruction with Mentoring Support provides a program of academic support for students enrolled in difficult required courses, while also creating valuable opportunities for faculty professional development and community interaction. By adapting the Supplemental Instruction (SI) model for the community college, this program has trained students and faculty to work together to facilitate learning and thinking skills through a learner-cantered approach of peer group study and community and faculty mentoring support. Study sessions are led by community college students who have successfully completed the course and who attend classes again with enrolled students. During the study session, the student leader uses course material to teach students study skill for learning and organizing the content. Faculty who are trained in study skills and learning strategies attend classes and study session in courses outside their discipline, and work as mentors to student leaders. In addition, local community leaders provide mentoring support to students in small group sessions and on-site visits.

Rosemary Wolfe, Ph.D.
Project Director
Anne Arundel Community College
101 College Parkway
Arnold, MD 21012
(410) 541-2430

EXECUTIVE SUMMARY

SUPPLEMENTAL INSTRUCTION WITH MENTORING SUPPORT

ANNE ARUNDEL COMMUNITY COLLEGE
101 College Parkway
Arnold, MD 21012

Rosemary Wolfe, Ph.D.
Project Director
(410) 541-2430

PROJECT OVERVIEW

Anne Arundel Community College's Supplemental Instruction with Mentoring Support provides a program of academic support for students enrolled in difficult required courses, while also creating valuable opportunities for faculty professional development and community interaction. Study sessions are led by community college students who have successfully completed the course and who attend classes again with enrolled students. During the study session, the student leader uses course material to teach students study skills for learning and organizing the content. Faculty who are trained in study skills and learning strategies attend classes and study session in courses outside their discipline, and work as mentors to student leaders. In addition, local community leaders provide mentoring support to students in small group sessions and on-site visits.

PURPOSE

To help students make the transition from high school to higher education, the community college needs a successful alternative approach to traditional academic support services that will help students develop thinking and study skills for difficult college courses. Study skills workshops and tutorial services typically have low usage by high risk students; Students who lack the thinking and questioning skills important for success in college courses see their needs as largely content-centered and reject remedial efforts to learn study skills in isolation.

BACKGROUND

During the 1987-88 academic year, Anne Arundel Community College conducted a pilot study using the Supplemental Instruction program in required courses at the community college. The adaptation of the SI model included a faculty mentor program to promote faculty awareness and development of interactive teaching skills needed to help students to better understand difficult course material. The proposed adaptation also included a community mentor program designed to connect business leaders' expertise and community contact to students in courses related to career and professional fields.

PROJECT DESCRIPTION

Community college students, who had successfully completed difficult required science, math, and business courses, modeled successful learning behaviors by attending class sessions again, taking notes, and completing class assignments. In addition, these student leaders conducted regularly scheduled out-of-class study sessions in which all participants worked together to master course content.

Student leaders were trained through a three-credit practicum in education course to model questioning techniques and learning strategies such as studying through time management, preparing for and anticipating test questions, and improving understanding of course material through organizational and study skills. During study sessions, student leaders demonstrated study strategies to promote critical thinking about course material.

During the project, faculty in social science, math, science, and business participated in the project as faculty mentors. Their responsibilities included: 1) attending a three day pre-semester training seminar, 2) attending all classes and study sessions as a student in the target class for the first four weeks of the semester, 3) working with student leaders to prepare strategies for the study session, 4) working with student leaders to create supplemental materials such as graphic representations of abstract concepts, 5) formally evaluating student leaders during the second half of the semester, and 6) keeping a daily journal.

Community mentoring support gave students the opportunity to interact with leaders in their career fields. SI leaders advertised the community mentor's visit through class announcements and in SI sessions; they also encouraged students to anticipate questions for discussion with the community mentor. On the day of the community leader's visit, SI leaders conducted an abbreviated study session, giving the community mentor the opportunity to observe and participate in an SI session. Then, the community mentor spoke informally to students, discussing career related topics and answering students' questions.

RESULTS

Students who participated in SI earned higher mean grades than students who did not participate. The overall mean grade earned by students who participated in SI was 2.7 versus 1.8 for students who did not participate.

The SI participants' success rates, like their mean grades, were higher than those of non-SI participants. The overall success rate of SI participants was 78% versus 44% for non-SI participants. Chi-square tests were performed to determine whether the use of SI in the classroom related to student success in the course. Students who participated in SI were found to have significantly higher success rates than students who did not participate.

Dissemination occurred through presentations at national and regional conferences, at the college division chairs' monthly meetings and to the President and Deans' weekly meetings. Articles were published in professional journals, along with a local newsletter. Two manuals of interactive learning strategies have been published and a videotape has been prepared and viewed by faculty and administrators interested in the program. Workshops using these materials will be conducted at other community colleges who are interested in replicating the project.

SUMMARY AND CONCLUSIONS

During the three years of the grant program, the Supplemental Instruction (SI) with Mentoring Support program was offered in forty-two required, entry level courses at the community college. Of the students who enrolled in these courses, 765 students comprised the SI group, utilizing the service by attending study sessions; 1,188 students comprised the non-SI group by opting not to attend study sessions. Students who attended the study sessions earned significantly higher mean grades and achieved higher rates of success in target courses than students who did not attend any of the SI sessions. No significant correlation was found among the number of study sessions attended by students and the grades earned. Students who attended the study sessions were also retained by the college at higher rates.

In evaluating the project, faculty mentors stated the program provided an opportunity to broaden their professional expertise and their perspectives on student learning. They had developed new teaching approaches, an awareness of their teaching styles, an understanding of students' needs.

Community leaders welcomed the opportunity to interact with students, to help them focus on local career possibilities, and to reinforce the importance of college course work for career success.

APPENDIX

Continued communication between the project director and the FIPSE program officer resulted in a number of ideas to improve the project and to overcome programmatic and political problems. The measure of the project's success is that it will continue on beyond the grant funding, and dissemination is continuing at other colleges interested in replicating the program.

SUPPLEMENTAL INSTRUCTION WITH MENTORING SUPPORT

ANNE ARUNDEL COMMUNITY COLLEGE

PROJECT OVERVIEW

Anne Arundel Community College's Supplemental Instruction with Mentoring Support has provided a program of academic support for students enrolled in difficult required courses, while also creating valuable opportunities for faculty professional development and community interaction through the Fund for the Improvement for Postsecondary Education three year grant. By adapting the Supplemental Instruction (SI) model for the community college, this program has trained students and faculty to work together to facilitate learning and thinking skills in difficult college courses.

PURPOSE

With the open-door policy accepting students with less than adequate academic preparation and lengthy interruptions between completing high school and enrolling in college course work, the attrition rate at the community college level averages thirty percent or higher across the country. The access to higher education these students receive is meaningless without a commitment to improve retention rates. To help students make the transition from high school to higher education, the community college needs a successful alternative approach to traditional academic support services that will help student develop thinking and study skills for difficult college courses.

Typically, academic support programs at the community college operate on a drop-in basis, offering services primarily designed to address the needs of high-risk students. Study skills workshops and tutorial services often have low usage by these students. Students who lack the thinking and questioning skills important for success in college courses see their needs as largely content-centered and reject remedial efforts to learn study skills in isolation.

BACKGROUND AND ORIGINS

During the 1987-88 academic year, Anne Arundel Community College conducted a pilot study adapting the Supplemental Instruction (SI) program, originated at the University of Missouri at Kansas City for four year colleges and universities, to difficult required high-risk courses at the community college. Comparative analysis showed a significantly higher overall final course grade average for students attending SI versus students not using SI.

The adaptation of the SI model included a faculty mentor program to promote faculty awareness and development of interactive teaching skills needed to help students to better understand difficult course material. The proposed adaptation also included a community mentor program designed to connect business leaders' expertise and community contact to students in courses related to career and professional fields.

PROJECT DESCRIPTION

Peer Academic Support

Difficult courses targeted for the program included those presented in the traditional lecture format and which dealt with unfamiliar and abstract concepts: introductory science courses in biology and chemistry; required mathematics courses in calculus, algebra, and statistics; business courses in accounting, economics, and law. Community college students, who had successfully completed the course, modeled successful learning behaviors by attending class sessions again, taking notes, and completing class assignments. In addition, these student leaders conducted regularly scheduled out-of-class study sessions in which all participants worked together to master course content.

Student leaders were trained through a three-credit practicum in education course to model questioning techniques and learning strategies such as studying through time management, preparing for and anticipating test questions, and improving understanding of course material through organizational and study skills. Interactive teaching strategies and cooperative learning models were demonstrated and practiced.

During study sessions, student leaders demonstrated study strategies to promote critical thinking about course material. Such strategies included paired problem-solving (Whimbey, 1975), metacognitive awareness (Wade, S. and Reynold, R., 1989), graphic

representations of abstract concepts, practice tests, text-study analysis (Maxwell, 1979), memory techniques, and learning games to provoke student interest.

Because study sessions were informal and held in nonthreatening settings, students who attended found opportunities to review course content, to use the language of the discipline, to organize their notes, and to connect with their fellow students. The result for students enrolled in the course was improvement in study skills, increased mastery of course content, and an increased sense of community within the group. Student leaders gained an increased awareness of the process of learning; they came to understand how they mastered difficult course material as well as how they helped fellow students organize ideas and learn to think independently.

Faculty Mentor Role and Professional Development

During the project, faculty in social science, math, science, and business participated in the project as faculty mentors. Their responsibilities included: 1) attending a three day pre-semester training seminar, 2) attending all classes and study sessions as a student in the target class for the first four weeks of the semester, 3) working with student leaders to prepare strategies for the study session, 4) working with student leaders to create supplemental materials such as graphic

representations of abstract concepts, 5) formally evaluating student leaders during the second half of the semester, and 6) keeping a daily journal.

Faculty mentors were placed in classes outside their own discipline; for example, a business professor mentored a student leader in biology; a math professor mentored a student leader in a law class. Faculty mentors were encouraged to assume the role of student while attending classes and study sessions. They became involved in the class as good students. They took notes, kept up with readings, and struggled through assignments. Because they were learning new material or, at least, subject matter they had not studied since their own college days, they experienced many of the teachable moments and some of the frustrations as other students in the class. As a student with experience in teaching, the faculty mentor helped the student leader identify difficult concepts in the subject matter. The intent was to connect the pedagogy of the faculty mentor's experience with the student leader's mastery of the subject matter. Faculty mentors reported that participating in a course of which they had virtually no knowledge was unsettling at first; however, the experience expanded their perspective. As a student, faculty mentors also had the opportunity to systematically observe another colleague's style and strategies for working with students, for teaching, and for managing college administrative details. Faculty mentors reported that the luxury of listening to a respected colleague in a challenging course

outside their own discipline was stimulating. Faculty mentors were encouraged to discuss with the instructor their reactions to course topics and to teaching strategies. The intent was to give faculty the opportunity to share ideas collegially in a nonthreatening setting. In addressing the instructor's strengths, the faculty mentor could reinforce successful strategies they had observed and give a colleague a well-deserved nod of appreciation. The faculty mentor's role was never intended to evaluate or report on findings, as with the formal peer evaluation used for promotion or tenure. Discussions between the instructor and faculty mentor were off-the-record.

Training Seminar

As the project director and a faculty member with experience teaching reading/study skills and education courses at the college, I led a three day training seminar for faculty mentors. Faculty mentors examined and practiced teaching and learning strategies. Study skills strategies in note-taking (Pauk, 1984), paired problem-solving (Whimbey, 1975), test taking, listening, organized text study (Maxwell, 1979), and time management, among others, were demonstrated and applied to specific course material targeted for the SI program. After listening to colleagues lectures on accounting, biology, and other target courses, faculty participated in simulated study sessions which demonstrated a specific study strategy for learning the subject matter. Faculty mentors also worked through

a series of exercises which used models of organization and metacognitive strategies (Bragstad and Stumpf, 1987) to learn new material. They examined how they learn; the process became more important than the product.

In addition, faculty mentors examined their own teaching and learning styles, learned questioning techniques, and practiced group management. As supervisors to student leaders, each faculty mentor worked with a student leader during the training seminar to prepare lessons and to evaluate teaching and study strategies applicable to the course they were to target. They also observed a videotape of a study session and together critically evaluated the tape in terms of the strategies used.

Journals

Faculty mentors kept journals to record their observations and reflections about classes and SI sessions. The journal was not a diary, and not a set of notes, but a generating of thoughtful ideas and responses to their experiences (Maimon, 1981). Through their writing, they addressed strengths they observed and problems that emerged and how they were solved. They also responded to their interaction with the instructor and with the student leader. They were instructed to write as much as they could, with at least one-half page summarizing the most important or memorable moment of each class and/or study session and one-half page summarizing daily problems or problem-solving techniques. All faculty mentors far exceeded the minimum.

Community Mentors

Community mentoring support gave students the opportunity to interact with leaders in their career fields. Local business and civic leaders were excellent resources for helping community college students explore their potential personal and career options. The grant project used community leaders as mentors to students participating in the program. Mentors were identified and recommended by student leaders, faculty, staff, and administrators at the college and included those active in the trade council, cooperative education, or advisory boards serving career programs at the college.

A community mentor was invited to attend a Supplemental Instruction study session for a course that would be required or applicable to the mentor's field. Visits have included a paralegal visiting an introductory paralegal course, an accountant for principles of accounting, an oceanographer and a nurse for biology, an engineer for calculus, a veterinarian for chemistry, and the regional vice-president of a local banking and trust firm for a business law course.

SI leaders advertised the community mentor's visit through class announcements and in SI sessions; they also encouraged students to anticipate questions for discussion with the community mentor. Community leaders received a letter outlining their role and topics for discussion: the duties and responsibilities of the job, decisions that may have influenced their success, the course's relevancy to the field, suggestions

for student success.

On the day of the community leader's visit, SI leaders conducted an abbreviated study session, giving the community mentor the opportunity to observe and participate in an SI session. Then, the community mentor spoke informally to students, discussing career topics and answering students' questions.

PROJECT RESULTS

Subjects

All students who were enrolled at Anne Arundel Community College in a class which offered the SI service were selected as subjects. For each class, students were assigned to one of two groups: (1) students who participated in Supplemental Instruction by attending one of more study sessions; and (2) students who did not participate in SI.

Procedure

In developing the student profiles the following data were obtained from the college's database: age, gender, ethnicity, grade point averages, test scores, admit status, credits attempted, disability status and retention rates. The remaining data were obtained from responses to a student survey: gross family income, parental education level, source of education funds, and single parent status.

When computing average grade point averages, alphanumeric

grades were translated to the following numeric grades: A=4; B=3; C=2; D=1; F=0. Grades of PA, W, WP, WF, NG, I, and AU were excluded. Course success was defined as the earning of a grade C or better, including PA. Unsuccessful grades were D, F, W, WP, and WF. Grades of NG, AU, and I were treated as missing.

Results

The profiles of the SI participants versus the non-SI participants revealed that the two groups of students were very similar in terms of their gender, ethnicity, age, admission status, placement, and aptitude test scores, gross family income, parental education level, and disabilities. The two groups of students did differ in terms of their fall to spring retention rates and grade point averages: students who participated in supplemental instruction were retained at substantially higher rates by the college and earned higher semester and cumulative grade point averages.

Mean Grades

Students who participated in SI earned higher mean grades than students who did not participate. The overall mean grade earned by students who participated in SI was 2.7 versus 1.8 for students who did not participate.

T-tests were conducted to statistically test the difference between the mean grades of SI participants and non-participants Students who participated in SI were found to have significantly higher mean grades than students who did not participate.

Success Rates

The SI participants' success rates, like their mean grades, were higher than those of non-SI participants. The overall success rate of SI participants was 78 % versus 44% for non-SI participants. Chi-square tests were performed to determine whether the use of SI in the classroom related to student success in the course. Students who participated in SI were found to have significantly higher success rates than students who did not participate.

SI Sessions Attended

Pearson product-moment correlations were conducted, by course, to determine the association between the number of study sessions attended by SI participants and their course grades. Students attended 1 to 30 sessions per semester, attending an average of 8 sessions. No significant correlations were found.

Student Evaluations

Students attending SI sessions completed an end of the semester questionnaire. Students rated the review sessions as being very helpful-- 4.6 on a Likert scale. As benefits of attending SI sessions, students commented on their clearer understanding of course material and instructor's expectations. They reported that the SI sessions improved their notetaking and questioning skills. Students also commented that the sessions were very supportive and created a sense of community and collegiality among students who may not have otherwise known each

other or have had the opportunity to work together. As a result of participating in the SI sessions, students listed techniques such as flash cards, study guides, practice tests, and problem-solving strategies they now use to learn course material.

Dissemination

During the grant project, the program's potential for improving students' success in difficult courses, its opportunities for professional growth for faculty, and its involvement of community leaders were disseminated through presentations at national and regional conferences and articles published in professional journals.

Articles describing key elements of the program were published in the Journal of Staff, Program, and Organizational Development, the Journal of Professional Studies, and the National Association of Developmental Educators Newsletter, among others. The program was presented at the National Association of Developmental Educators Conference, the Black Student Retention Conference, the Conference on Student Retention in Two-Year Colleges, the National Council of Teachers of English National Conference, and at Clark County Community College and Essex Community College, as well as to other local, regional, and national conferences.

Presentations were made at the college to the division chairs' monthly meetings and to the President and Deans' weekly meetings. A newsletter, called "SI News," was established and

distributed to the faculty and staff. Increased awareness of the program was also promoted through campus news articles and ads in the schedule of classes. A manual of interactive learning strategies with sample exercises for faculty and student use in classes using the SI service was published and distributed. Faculty mentors were asked to discuss its use, along with the benefits of the SI program, at a faculty division meeting.

The project will continue to promote student success in targeted difficult courses, to provide professional development for faculty, and to work with community leaders to motivate student interest in careers.

Faculty mentors will continue to develop strategies and materials and will participate in training as a professional development activity. A training manual for faculty mentors of SI leaders has been developed in cooperation with faculty participating as mentors. This "Faculty Manual of Interactive Teaching Strategies" is based on the general topics included in the faculty mentor training. The manual will be disseminated for faculty use during in-service faculty workshops. A slide/tape presentation has been prepared in cooperation with the college's media services department. This program describes key elements of the program, explains the project's outcomes, and highlights benefits to students, faculty, and the community. This audio-visual program will be an excellent tool for introducing and explaining the program to faculty and administrators interested in replicating the program.

Workshops will be conducted at other community colleges who are interested in replicating the project. Participants will have the opportunity to observe simulated SI study sessions, practice the techniques in the manuals for interactive learning strategies, and identify ideas for adaptation to their own campuses.

SUMMARY AND CONCLUSIONS

During the three years of the grant program, the Supplemental Instruction (SI) with Mentoring Support program was offered in forty-two required, entry level courses at the community college. Of the students who enrolled in these courses, 765 students comprised the SI group, utilizing the service by attending study sessions; 1,188 students comprised the non-SI group by opting not to attend study sessions. Students who attended the study sessions earned significantly higher mean grades and achieved higher rates of success in target courses than students who did not attend any of the SI sessions. No significant correlation was found among the number of study sessions attended by students and the grades earned. The program is designed to address the content needs of students; some students only attended the study sessions when they were encountering problems in the course, and attended fewer sessions once the problems were solved. Students who attended the study sessions were also retained by the college at higher rates. The profiles of the SI participants versus the non-SI participants revealed very few demographical variations between the two groups, indicating that the difference in their academic performance was not attributable to extraneous factors.

Benefits for Faculty Development

In evaluating the project, faculty mentors stated the program provided an opportunity to broaden their professional expertise and their perspectives on student learning. The interchange

across disciplines served to stimulate thought and promote rapport among colleagues. Mentors reported gaining an increased respect for and appreciation of another colleague's discipline. They had developed new teaching approaches and a new awareness of their own personal teaching styles. As supervisors, they had the opportunity to plan lessons, write supplemental course materials, and encourage the initiative and creativity of motivated and competent student leaders. As they became students again, mentors gained insight into students' frustrations and empathy for the time constraints and pressures students face. A major benefit of the program was that it provided a forum for faculty to explore ideas and to discuss the implementation of these ideas.

Community Mentors

Both students and community mentors evaluated the session, giving suggestions for maintaining and improving the program. In addition, the community mentor received the names and telephone numbers of students interested in further contact; students were also invited to contact the mentor to arrange a site visit or to continue the discussion.

Through these small group forums, community leaders joined students and faculty in a partnership for student success. Students saw mentors as a link to defining and achieving their goals. Community leaders welcomed the opportunity to interact with students and to help them focus on local career possibilities. An additional benefit was that mentors reinforced the importance of college course work for career success.

DATA RESULTS
SUPPLEMENTAL INSTRUCTION WITH MENTORING SUPPORT
at
ANNE ARUNDEL COMMUNITY COLLEGE

The significance tests are based on 42 required entry level classes at the community college over the past three years.

SI Participants
N= 765

Grade	Number of Students
A	193
B	220
C	182
D	56
F	41
W	73

D/F/W 170

Success Rate 78%

Non-SI Participants
N = 1188

Grade	Number of Students
A	94
B	188
C	242
D	149
F	209
W	306

D/F/W 664

Success Rate 44%

	SI Group	Non- SI Group
Mean	2.7	1.8
Median	3	2
Standard Deviation	1.3	1.2

T test analysis shows the difference in the means were statistically significant at the .001 level.

Chi-square analysis tested whether the use of Supplemental Instruction in the classroom related to student success in the course. Students who participated in the program were found to have significantly higher success rates than students who did not participate.

Attendance rate in sessions ranged from 20% to 60% of the enrolled class, with the average attendance rate of 40% of students enrolled in the class attending SI sessions.

APPENDIX

As the project evolved, many of the management and technical problems were identified and resolved. Continued communication between the project director and the FIPSE program officer resulted in a number of ideas to improve the project. Dialogue journals were established to meet students' need to be able to raise problems or receive reinforcement of ideas from the project director/trainer without constantly scheduling meetings. Students wrote in their journals daily and left them in the director's mailbox. The director read each journal entry and responded in writing in the journal, creating a dialogue.

The pre-semester survey was revised to include information useful for establishing a profile of student participants. Data entry and statistical analysis was institutionalized through the college's office of Planning and Research with the support of the FIPSE program officer. A data bank is now established for ongoing analysis of the program.

During the third year of the grant, the college was required to subsidize the faculty mentor component of the project. Additional faculty interest in the mentor program was motivated by the college's addition of faculty development to the strategic planning goals. The core of faculty participating as faculty mentors has increased to approximately fifteen. In addition, the college has agreed to award the equivalent of one graduate credit to each full-time faculty member who participates as a faculty mentor and to include this as part of each individual faculty

professional development plan.

As the core of community mentors becomes established, it becomes less difficult to schedule business leaders for visits to the campus. It has not always been possible to arrange the visit before midterm. In addition, students in career oriented courses such as accounting, law, and biology (nursing students) rated the value of the community mentors higher than those students in math and chemistry courses. With the help of the FIPSE program officer, a survey to question students' interest in community leaders' has been developed and will be used to determine courses best suited.

This project would not have enjoyed the success and its institutionalization into the community college that it has without the support (and clout) of FIPSE backing. The FIPSE program officer was knowledgeable and creative in suggesting innovative ways to solve programmatic and political problems. This has been a great experience for all involved; the measure of the project's success is that it will continue on this campus beyond the grant funding. In addition, dissemination is continuing as other colleges are interested in replicating the program.

COURSES USING SUPPLEMENTAL INSTRUCTION WITH MENTORING SUPPORT

ANNE ARUNDEL COMMUNITY COLLEGE

1988 - 1991

BUSINESS

BPA 153	Business Law
BPA 211	Accounting Principles I
BPA 212	Accounting Principles II
BPA 251	Intermediate Accounting
ECO 111	Economics
LGS 111	Paralegal Studies

COMPUTER SCIENCE

CPS 105	Program System and Design

MATHEMATICS

MAT 131	College Algebra
MAT 132	Statistics
MAT 151	Pre-Calculus
MAT 191	Calculus I
MAT 192	Calculus II

SCIENCE

BIO 101	Fundamentals of Biology
BIO 223	Microbiology
CHE 111	Introduction to Chemistry

SOCIAL SCIENCE

SOC 111	Introduction to Sociology